

CLAIMS

I Claim:

1. An apparatus comprising

An image projection lighting device comprising:

a base housing in which is located an electrical component;

a yoke;

a communications port;

a processor;

a lamp housing;

wherein the lamp housing can be remotely positioned in relation to the base;

the lamp housing comprising

a lamp,

and a first light valve;

wherein the communications port receives a contrast command; and

wherein the processor modifies contrast of image data in response to the contrast command to form contrast modified image data.

2. The apparatus of claim 1

wherein the contrast modified image data is created by applying gain to the image data.

3. The apparatus of claim 2

wherein the image data contains the components of red, green and blue and the gain is applied to the red, green and blue components equally.

4. The apparatus of claim 2 wherein

the gain applied to the image data causes clipping of the brighter components of the image data.
5. The apparatus of claim 4 wherein

the clipping is greater than ten percent.
6. An apparatus comprising

an image projection lighting device comprising:
 - a base housing in which is located an electrical component;
 - a yoke;
 - a communications port;
 - a processor;
 - a lamp housing;wherein the lamp housing can be remotely positioned in relation to the base;
wherein the following is located within the lamp housing:
 - a lamp,
 - and a first light valve;wherein the communications port receives a black level command;
wherein the processor modifies image data in response to the black level command to form modified image data having a modified black level.
7. The apparatus of claim 6

wherein the modified image data is created by adding or subtracting an offset to the image data

8. The apparatus of claim 7 wherein
 - the offset applied to the image data causes clipping of the darker components of the image data.
9. The apparatus of claim 8 wherein
 - the clipping is greater than ten percent.
10. A lighting system comprising
 - a plurality of image projection lighting devices;
 - and a central controller;
 - wherein each of the image projection lighting devices comprises:
 - a base housing in which is located an electrical component;
 - a yoke;
 - a communications port;
 - wherein the lamp housing can be remotely positioned in relation to the base
 - a lamp housing in which is located a lamp and a light valve; and
 - wherein the lighting system under control of an operator applies a contrast command to image data;
 - and wherein the image data is modified by the contrast command to form modified image data;
 - wherein the image data has an original image coloration;
 - and wherein the modified image data substantially preserves the original image coloration;

and wherein the modified image data can be projected onto a projection surface by any one of the plurality of image projection lighting devices and can produce a brighter image than the image data.

11. The lighting system of claim 10 wherein

the contrast command causes a function to be applied to the image data.

12. The lighting system of claim 11 wherein

the function applied to the image data is gain.

13. The lighting system of claim 12 wherein

the gain applied to the image causes clipping of the brighter components of the image.

14. The apparatus of claim 13 wherein

the clipping is greater than ten percent.

15. The lighting system of claim 11 further including

a processor and the function is applied by a processor.

16. The lighting system of claim 15 wherein

the processor is a component of one of the plurality of image projection lighting devices.

17. The lighting system of claim 15 wherein

the processor is a component of the central controller.

18. A lighting system comprising

a plurality of image projection lighting devices;

and a central controller;

wherein each of the image projection lighting devices comprises:

a base housing in which is located an electrical component

a yoke;

a communications port;

wherein the lamp housing can be remotely positioned in relation to the base

a lamp housing in which is located a lamp and a light valve; and

wherein the lighting system under control of an operator may apply a contrast command to image data

and wherein the image data is modified by the contrast command to form a modified image data;

wherein the image data has an original coloration;

and wherein the modified image data substantially preserves the original image coloration;

and wherein the modified image data can be projected onto a projection surface by any one of the plurality of image projection lighting devices and can produce a brighter image than the image data and wherein the modified image data can be projected onto a projection surface by any one of the plurality of image projection lighting devices and the modified image data produces an improved black level for the darkest components of the modified image data.

19. The lighting system of claim 18 wherein

the black level command causes a function to be applied to the image data.

20. The lighting system of claim 19 wherein
 - the function applied to the image data is an offset.
21. The lighting system of claim 20 wherein
 - the offset applied to the image data causes clipping of the darker components of the image data.
22. The apparatus of claim 21 wherein
 - the clipping is greater than ten percent.
23. The lighting system of claim 19 further including
 - a processor and the function is applied by a processor.
24. The lighting system of claim 23 wherein
 - the processor is a component of one of the plurality of image projection lighting devices.
25. The lighting system of claim 24 wherein
 - the processor is a component of the central controller.
26. A lighting system comprising
 - a plurality of image projection lighting devices;
 - and a central controller;
 - wherein each of the image projection lighting devices comprises:
 - a base housing in which is located an electrical component;

a yoke;

a communications port;

a lamp housing in which is located a lamp and a light valve; and

wherein the lamp housing can be remotely positioned in relation to the base housing;

wherein the lighting system under control of an operator can apply a contrast command to image data;

and wherein an operator of the central controller can vary the clipping of the brighter components of the image data by applying the contrast command.

27. The lighting system of claim 26

wherein the contrast command may be applied to any of the plurality of image projection lighting devices.

28. The lighting system of claim 26

wherein the clipping may be varied greater than ten percent.

29. A lighting system comprising

a plurality of image projection lighting devices;

and a central controller;

wherein each of the image projection lighting devices comprises:

a base housing in which is located an electrical component

a yoke;

a communications port;

a lamp housing in which is located a lamp and a light valve; and

wherein the lamp housing can be remotely positioned in relation to the base housing;

wherein the lighting system under control of an operator may apply a black level command to image data;

and wherein an operator of the central controller may vary the clipping of the darker components of the image data by applying the black level command.

30. The lighting system of claim 29 wherein

the black level command may be applied to any of the plurality of image projection lighting devices.

31. The lighting system of claim 29 wherein

the black level command may be varied greater than ten percent.